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Cost estimated for the last database search :	1.22 USD
Estimated total session cost :	1.22 USD

Selected file: PLUSPAT

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Last update of file: 2004/02/18 (YYYY/MM/DD) 2004-07/UP (basic update)

?us6340767/pn

\*\* SS 2: Results 1

Search statement 3

?prt full legalall max

1/1 PLUSPAT - (C) QUESTEL-ORBIT

PN - US6340767 B1 20020122 [US6340767]

TI - (B1) Processes for the preparation of 5-hydroxy-3-oxopentanoic acid  
derivatives

PA - (B1) KANEGAFUCHI CHEMICAL IND (JP)

PA0 - Kaneka Corporation, Osaka [JP]

IN - (B1) INOUE KENJI (JP); NISHIYAMA AKIRA (JP)

AP - US76221501 20010405 [2001US-0762215]

FD - PCT/JP00/03574 20000602 [2000WO-JP03574]

- WO00/75099 20001214 [WO200075099]

PR - JP15803399 19990604 [1999JP-0158033]

- JP2000023804 20000201 [2000JP-0023804]

- WOJP0003574 20000602 [2000WO-JP03574]

IC - (B1) C07C-051/00

EC - C07C-067/343 C07C-069:716

- C07C-253/30

- C07D-319/06

- C12P-007/62

PCL - ORIGINAL (O) : 554115000; CROSS-REFERENCE (X) : 560174000

DT - Corresponding document

CT - Nskata et al., "Synthetic study of marin macrolide swinholide", Chem.  
Pham. Bull., vol. 42, No. 11, p. 2403-05, 1994.

STG - (B1) U.S. Patent (no pre-grant pub.) after Jan. 2, 2001

AB - This invention provides a process for producing a  
5-hydroxy-3-oxopentanoic acid, a useful pharmaceutical intermediate,  
easily from a readily available, inexpensive starting material without  
using any extraordinary production equipment such as a  
very-low-temperature reactor.

Thus, this invention provides a process for producing a

5-hydroxy-3-oxopentanoic acid  
which comprises permitting a lithium amide to act upon a mixture of an  
acetic acid ester and a 3-hydroxypropionic acid derivative at not  
below -20 (degree) C.

Further, this invention also provides a process for producing a  
5-hydroxy-3-oxopentanoic acid  
which comprises treating a mixture of an acetic acid ester and a  
3-hydroxypropionic acid derivative with a Grignard reagent to prepare  
a mixture of a compound and an acetic acid ester of the above formula  
(I),

and permitting a lithium amide to act upon the mixture at a  
temperature not below -20 (degree) C.

UP - 2002-06

1/1 LGST - (C) EPO

PN - US6340767 B1 20020122 [US6340767]

AP - US76221501 20010405 [2001US-0762215]

ACT - 20040113 US/RF-A

REISSUE APPLICATION FILED

EFFECTIVE DATE: 20031112

UP - 2004-05

1/1 CRXX - (C) CLAIMS/RRX

AN - 3631028

PN - 6,340,767 A 20020122 [US6340767]

PA - Kaneka Corp JP

PT - C (Chemical)

ACT - 20031112 REISSUE REQUESTED

ISSUE DATE OF O.G.: 20040113

REISSUE REQUEST NUMBER: 10/705665

EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 1621

Reissue Patent Number:

UP - 2004-03

UACT- 2004-01-13

Search statement 3

?st

Session finished: 25 FEB 2004 Time 22:57:46

PLUSPAT - Time in minutes : 2,90

The cost estimation below is based on Questel's  
standard price list

Estimated cost :	7.00 USD
Records displayed and billed :	1
Estimated cost :	1.32 USD
Cost estimated for the last database search :	8.32 USD
Estimated total session cost :	9.54 USD

LGST - Time in minutes : 0,10

The cost estimation below is based on Questel's

## standard price list

	Estimated cost :	0.12 USD
Records displayed and billed :	1	
	Estimated cost :	0.60 USD
Legal-Status informations :	1	
	Estimated cost :	0.50 USD
Cost estimated for the last database search :		1.22 USD
Estimated total session cost :		10.76 USD

CRXX - Time in minutes : 0,08

The cost estimation below is based on Questel's  
standard price list

	Estimated cost :	0.14 USD
Records displayed and billed :	1	
	Estimated cost :	5.50 USD
Legal-Status informations :	1	
	Estimated cost :	0.50 USD
Cost estimated for the last database search :		6.14 USD
Estimated total session cost :		16.90 USD

LITA - Time in minutes : 0,02

The cost estimation below is based on Questel's  
standard price list

	Estimated cost :	0.04 USD
Cost estimated for the last database search :		0.04 USD
Estimated total session cost :		16.94 USD

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?Current host setting :8 BITS - KERMIT protocol

Mode actif du serveur :8 BITS - protocole KERMIT

I - QUESTEL.ORBIT, IMAGES Gif/Tiff

M - MERGED MARKUSH SERVICE (MMS)

Q - QUESTEL.ORBIT (TTY/ASCII terminals)

C - Change your mode to 7 BITS and KERMIT protocol

X - EXIT

Choice / Choix ?

? b 345

25feb04 16:34:52 User259286 Session D29.2

\$0.00 0.072 DialUnits File410

\$0.00 Estimated cost File410

\$0.50 TELNET

\$0.50 Estimated cost this search

\$0.50 Estimated total session cost 0.154 DialUnits

File 345:Inpadoc/Fam.&amp; Legal Stat 1968-2003/UD=200408

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\*File 345: October 12, 2003 - changes to legal status now online.

See HELP NEWS 345 for details.

Set Items Description

? e pn=us 6340767

Ref.	Items	Index-term
E1	1	PN=US 6340765
E2	1	PN=US 6340766
E3	1	*PN=US 6340767
E4	1	PN=US 6340768
E5	1	PN=US 6340769
E6	1	PN=US 6340770
E7	1	PN=US 6340771
E8	1	PN=US 6340772
E9	1	PN=US 6340773
E10	1	PN=US 6340774
E11	1	PN=US 6340775
E12	1	PN=US 6340776

Enter P or PAGE for more

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S1 1 PN='US 6340767'

? t 1/39/1

1/39/1

DIALOG(R)File 345:Inpadoc/Fam.&amp; Legal Stat

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15723215

Basic Patent (No,Kind,Date): CA 2305564 AA 20000217 &lt;No. of Patents: 017&gt;

Patent Family:

Patent No	Kind	Date	Applic No	Kind	Date
AU 200051043	A5	20001228	AU 200051043	A	20000602
CA 2305564	AA	20000217	CA 2305564	A	19990805 (BASIC)
CA 2339357	AA	20001214	CA 2339357	A	20000602
CN 1274356	T	20001122	CN 99801281	A	19990805
EP 1024139	A1	20000802	EP 99935066	A	19990805
EP 1104750	A1	20010606	EP 2000935526	A	20000602
EP 1024139	A4	20020417	EP 99935066	A	19990805
EP 1104750	A4	20020410	EP 2000935526	A	20000602
HU 200101122	AB	20010828	HU 20011122	A	19990805
HU 200103788	AB	20020228	HU 20013788	A	20000602
NO 200001703	A	20000403	NO 20001703	A	20000403
NO 200001703	A0	20000403	NO 20001703	A	20000403
US 20030040634	AA	20030227	US 242453	A	20020913
US 6340767	BA	20020122	US 762215	A	20010405
US 6472544	BA	20021029	US 509998	A	20000816
WO 200008011	A1	20000217	WO 99JP4229	A	19990805

WO 200075099 A1 20001214 WO 2000JP3574 A 20000602  
Priority Data (No,Kind,Date):  
JP 99158033 A 19990604  
JP 200023804 A 20000201  
WO 2000JP3574 W 20000602  
JP 98221495 A 19980805  
WO 99JP4229 W 19990805  
US 242453 A 20020913  
US 509998 A3 20000816

## PATENT FAMILY:

## AUSTRALIA (AU)

Patent (No,Kind,Date): AU 200051043 A5 20001228  
PROCESSES FOR THE PREPARATION OF 5-HYDROXY-3-OXOPENTANOIC ACID  
DERIVATIVES (English)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND  
Author (Inventor): NISHIYAMA AKIRA; INOUE KENJI  
Priority (No,Kind,Date): JP 99158033 A 19990604; JP 200023804 A  
20000201; WO 2000JP3574 W 20000602  
Applic (No,Kind,Date): AU 200051043 A 20000602  
IPC: \* C07C-067/343; C07C-069/716; C07C-253/30; C07C-255/21;  
C07B-049/00  
CA Abstract No: \* 132(13)166230U; 134(04)041920D  
Derwent WPI Acc No: \* C 00-224013; C 01-091183  
Language of Document: English

## CANADA (CA)

Patent (No,Kind,Date): CA 2305564 AA 20000217  
PROCESS FOR THE PREPARATION OF OPTICALLY ACTIVE  
2-(6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL)ACETIC ACID DERIVATIVES (English  
; French)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): UHEYAMA NOBORU (JP); KONDO TAKESHI (JP); MITSUDA  
MASARU (JP); YAMADA YUKIO (JP); KIZAKI NORIYUKI (JP); YASOHARA  
YOSHIHIKO (JP); INOUE KENJI (JP); MIYAZAKI MAKOTO (JP); NISHIYAMA  
AKIRA (JP)  
Priority (No,Kind,Date): JP 98221495 A 19980805; JP 99158033 A  
19990604; WO 99JP4229 W 19990805  
Applic (No,Kind,Date): CA 2305564 A 19990805  
IPC: \* C07D-319/06; C12P-007/04; C07D-319/08; C07C-059/115;  
C07C-051/353; C07C-059/90  
CA Abstract No: \* 132(13)166230U; 134(04)041920D  
Derwent WPI Acc No: \* C 00-224013; C 01-091183  
Language of Document: English

Patent (No,Kind,Date): CA 2339357 AA 20001214  
PROCESSES FOR THE PREPARATION OF 5-HYDROXY-3-OXOPENTANOIC ACID  
DERIVATIVES (English; French)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): NISHIYAMA AKIRA (JP); INOUE KENJI (JP)  
Priority (No,Kind,Date): JP 99158033 A 19990604; JP 200023804 A  
20000201; WO 2000JP3574 W 20000602  
Applic (No,Kind,Date): CA 2339357 A 20000602  
IPC: \* C07C-067/343; C07B-049/00; C07C-255/21; C07C-253/30;  
C07C-069/716  
CA Abstract No: \* 132(13)166230U; 134(04)041920D  
Derwent WPI Acc No: \* C 00-224013; C 01-091183  
Language of Document: English

## CANADA (CA)

Legal Status (No,Type,Date,Code,Text):

CA 2305564 P 20000331 CA REFW CORRESPONDS TO PCT  
APPLICATION (ENTSPRICHT PCT ANMELDUNG)  
WO 200008011 P  
CA 2339357 P 20010202 CA REFW CORRESPONDS TO PCT  
APPLICATION  
WO 200075099 P

## CHINA (CN)

Patent (No,Kind,Date): CN 1274356 T 20001122  
PROCESS FOR PREPN. OF OPTICALLY ACTIVE  
2-(16-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL) ACETIC ACID DERIVATIVES  
(English)  
Patent Assignee: KANEKA CHEMICAL IND CO LTD (JP)  
Author (Inventor): NORIYUKI KIZAKI (JP); YUKIO YAMADA (JP);  
YOSHIHIKO YASOHARA (JP)  
Priority (No,Kind,Date): JP 98221495 A 19980805; JP 99158033 A  
19990604  
Applic (No,Kind,Date): CN 99801281 A 19990805  
IPC: \* C07D-319/06; C07D-319/08; C07C-059/90; C07C-051/353;  
C07C-059/115; C12P-007/04  
CA Abstract No: \* 132(13)166230U; 134(04)041920D  
Derwent WPI Acc No: \* C 00-224013; C 01-091183  
Language of Document: Chinese

## EUROPEAN PATENT OFFICE (EP)

Patent (No,Kind,Date): EP 1024139 A1 20000802  
PROCESS FOR THE PREPARATION OF OPTICALLY ACTIVE 2-  
6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL) ACETIC ACID DERIVATIVES PROCEDE DE  
PREPARATION DE DERIVES OPTIQUEMENT ACTIFS DE L'ACIDE 2-  
6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL) ACETIQUE VERFAHREN ZUR HERSTELLUNG  
OPTISCH AKTIVER  
2-(6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL)-ESSIGSAURE-DERIVATE (English;  
French; German)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): KIZAKI NORIYUKI (JP); YAMADA YUKIO (JP); YASOHARA  
YOSHIHIKO (JP); NISHIYAMA AKIRA (JP); MIYAZAKI MAKOTO (JP);  
MITSUDA MASARU (JP); KONDO TAKESHI (JP); UYAMA NOBORU (JP); INOUE  
KENJI (JP)  
Priority (No,Kind,Date): WO 99JP4229 W 19990805; JP 98221495 A  
19980805; JP 99158033 A 19990604  
Applic (No,Kind,Date): EP 99935066 A 19990805  
Designated States: (National) AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LI; LU; MC; NL; PT; SE  
IPC: \* C07D-319/06; C07D-319/08; C07C-059/90; C07C-051/353;  
C07C-059/115; C12P-007/04; C12P-007-04; C12R-001-72; C12R-001-645;  
C12R-001-78; C12R-001-84; C12R-001-85; C12R-001-13; C12R-001-15;  
C12R-001-01

Language of Document: English

Patent (No,Kind,Date): EP 1104750 A1 20010606  
PROCESSES FOR THE PREPARATION OF 5-HYDROXY-3-OXOPENTANOIC ACID  
DERIVATIVES PROCEDES DE PREPARATION DE DERIVES D'ACIDE 5-HYDROXY-3-  
OXOPENTANOIQUE VERFAHREN ZUR HERSTELLUNG VON  
5-HYDROXY-3-OXO-PENTANSÄURE-DERIVATEN (English; French; German)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): NISHIYAMA AKIRA (JP); INOUE KENJI (JP)  
Priority (No,Kind,Date): WO 2000JP3574 W 20000602; JP 99158033 A  
19990604; JP 200023804 A 20000201  
Applic (No,Kind,Date): EP 2000935526 A 20000602  
Designated States: (National) AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LI; LU; MC; NL; PT  
IPC: \* C07C-067/343; C07C-069/716; C07C-253/30; C07C-255/21;

C07M-007-00; C07B-049-00

Language of Document: English

Patent (No,Kind,Date): EP 1024139 A4 20020417

PROCESS FOR THE PREPARATION OF OPTICALLY ACTIVE 2-

6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL)ACETIC ACID DERIVATIVES PROCEDE DE  
PREPARATION DE DERIVES OPTIQUEMENT ACTIFS DE L'ACIDE 2-6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL) ACETIQUE VERFAHREN ZUR HERSTELLUNG  
OPTISCH AKTIVER2-(6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL)-ESSIGSAURE-DERIVATE (English;  
French; German)

Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)

Author (Inventor): KIZAKI NORIYUKI (JP); YAMADA YUKIO (JP); YASOHARA  
YOSHIHIKO (JP); NISHIYAMA AKIRA (JP); MIYAZAKI MAKOTO (JP);MITSUDA MASARU (JP); KONDO TAKESHI (JP); UYEYAMA NOBORU (JP); INOUE  
KENJI (JP)

Priority (No,Kind,Date): WO 99JP4229 W 19990805; JP 98221495 A

19980805; JP 99158033 A 19990604

Applic (No,Kind,Date): EP 99935066 A 19990805

Designated States: (National) AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LI; LU; MC; NL; PT; SE

IPC: \* C07D-319/06; C07C-067/343; C07C-067/31

Language of Document: English

Patent (No,Kind,Date): EP 1104750 A4 20020410

PROCESSES FOR THE PREPARATION OF 5-HYDROXY-3-OXOPENTANOIC ACID

DERIVATIVES PROCEDES DE PREPARATION DE DERIVES D'ACIDE 5-HYDROXY-3-  
OXOPENTANOIQUE VERFAHREN ZUR HERSTELLUNG VON

5-HYDROXY-3-OXO-PENTANSÄURE-DERIVATEN (English; French; German)

Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)

Author (Inventor): NISHIYAMA AKIRA (JP); INOUE KENJI (JP)

Priority (No,Kind,Date): WO 2000JP3574 W 20000602; JP 99158033 A

19990604; JP 200023804 A 20000201

Applic (No,Kind,Date): EP 2000935526 A 20000602

Designated States: (National) AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LI; LU; MC; NL; PT

IPC: \* C07C-067/343; C07M-007-00; C07B-049-00

Language of Document: English

## EUROPEAN PATENT OFFICE (EP)

Legal Status (No,Type,Date,Code,Text):

EP 1024139 P 19980805 EP AA PRIORITY (PATENT  
APPLICATION) (PRIORITAET (PATENTANMELDUNG))EP 1024139 P 19990604 EP AA PRIORITY (PATENT  
APPLICATION) (PRIORITAET (PATENTANMELDUNG))EP 1024139 P 19990805 EP AA PCT-APPLICATION  
(PCT-ANMELDUNG)EP 1024139 P 19990805 EP AE EP-APPLICATION  
(EUROPAEISCHE ANMELDUNG)EP 1024139 P 20000802 EP AK DESIGNATED CONTRACTING  
STATES IN AN APPLICATION WITH SEARCH REPORT:  
(IN EINER ANMELDUNG BENANNTE VERTRAGSSTAATEN)EP 1024139 P 20000802 EP A1 PUBLICATION OF APPLICATION  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE

WITH SEARCH REPORT (VEROEFFENTLICHUNG DER ANMELDUNG MIT RECHERCHENBERICHT)

EP 1024139 P 20000920 EP 17P REQUEST FOR EXAMINATION FILED (PRUEFUNGSANTRAG GESTELLT) 20000727

EP 1024139 P 20020417 EP AK DESIGNATED CONTRACTING STATES MENTIONED IN A SUPPLEMENTARY SEARCH REPORT: (IN EINEM ERGAENZENDEN RECHERCHENBERICHT BENANNTE VERTRAGSSTAATEN)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

EP 1024139 P 20020417 EP A4 SUPPLEMENTARY SEARCH REPORT (ERGAENZENDER RECHERCHENBERICHT) 20020304

EP 1024139 P 20020417 EP RIC1 CLASSIFICATION (CORRECTION) (KLASSIFIKATION (KORR.)) 7C 07D 319/06 A, 7C 07C 67/343 B, 7C 07C 67/31 B

EP 1024139 P 20030205 EP 17Q FIRST EXAMINATION REPORT (ERSTER PRUEFUNGSBESCHIED) 20021219

EP 1104750 P 19990604 EP AA PRIORITY (PATENT APPLICATION) (PRIORITAET (PATENTANMELDUNG))

JP 99158033 A 19990604

EP 1104750 P 20000201 EP AA PRIORITY (PATENT APPLICATION) (PRIORITAET (PATENTANMELDUNG))

JP 200023804 A 20000201

EP 1104750 P 20000602 EP AA PCT-APPLICATION (PCT-ANMELDUNG) WO 2000JP3574 W 20000602

EP 1104750 P 20000602 EP AE EP-APPLICATION (EUROPAEISCHE ANMELDUNG) EP 2000935526 A 20000602

EP 1104750 P 20010606 EP AK DESIGNATED CONTRACTING STATES IN AN APPLICATION WITH SEARCH REPORT: (IN EINER ANMELDUNG BENANNTE VERTRAGSSTAATEN) AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT

EP 1104750 P 20010606 EP AX EXTENSION OF THE EUROPEAN PATENT TO (ERSTRECKUNG DES EUROPAEISCHEN PATENTS AUF) AL;LT;LV;MK;RO;SI

EP 1104750 P 20010606 EP A1 PUBLICATION OF APPLICATION WITH SEARCH REPORT (VEROEFFENTLICHUNG DER ANMELDUNG MIT RECHERCHENBERICHT)

EP 1104750 P 20010606 EP 17P REQUEST FOR EXAMINATION FILED (PRUEFUNGSANTRAG GESTELLT) 20010130

EP 1104750 P 20020410 EP AK DESIGNATED CONTRACTING STATES MENTIONED IN A SUPPLEMENTARY SEARCH REPORT: (IN EINEM ERGAENZENDEN RECHERCHENBERICHT BENANNTE VERTRAGSSTAATEN)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT

EP 1104750 P 20020410 EP A4 SUPPLEMENTARY SEARCH REPORT (ERGAENZENDER RECHERCHENBERICHT)



20020226  
EP 1104750 P 20020410 EP RIC1 CLASSIFICATION (CORRECTION)  
(KLASSIFIKATION (KORR.))  
7C 07C 67/343 A, 7C 07M 7:00 Z, 7C 07B 49:00  
Z  
EP 1104750 P 20030409 EP 17Q FIRST EXAMINATION REPORT  
(ERSTER PRUEFUNGSBESCHEID)  
20030221

## HUNGARY (HU)

Patent (No,Kind,Date): HU 200101122 AB 20010828  
PROCESS FOR THE PREPARATION OF OPTICALLY ACTIVE  
2-(6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL)ACETIC ACID DERIVATIVES  
(English)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): INOUE KENJI (JP); KIZAKI NORIYUKI (JP); KONDO  
TAKESHI (JP); MITSUDA MASARU (JP); MIYAZAKI MAKOTO (JP); NISHIYAMA  
AKIRA (JP); UYEYAMA NOBORU (JP); YAMADA YUKIO (JP); YASOHARA  
YOSHIHIKO (JP)  
Priority (No,Kind,Date): JP 98221495 A 19980805; JP 99158033 A  
19990604; WO 99JP4229 W 19990805  
Applic (No,Kind,Date): HU 20011122 A 19990805  
IPC: \* C07D-319/06  
CA Abstract No: \* 132(13)166230U; 134(04)041920D  
Derwent WPI Acc No: \* C 00-224013; C 01-091183  
Language of Document: Hungarian  
Patent (No,Kind,Date): HU 200103788 AB 20020228  
PROCESSES FOR THE PREPARATION OF 5-HYDROXY-3-OXOPENTANOIC ACID  
DERIVATIVES (English)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): INOUE KENJI (JP); NISHIYAMA AKIRA (JP)  
Priority (No,Kind,Date): JP 99158033 A 19990604; JP 200023804 A  
20000201; WO 2000JP3574 W 20000602  
Applic (No,Kind,Date): HU 20013788 A 20000602  
IPC: \* C07C-067/343  
CA Abstract No: \* 132(13)166230U; 134(04)041920D  
Derwent WPI Acc No: \* C 00-224013; C 01-091183  
Language of Document: Hungarian

## NORWAY (NO)

Patent (No,Kind,Date): NO 200001703 A 20000403  
FREMANGANGSM TE FOR FREMSTILLING AV OPTISK AKTIVE 2-(6- (Norwegian)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): KIZAKI NORIYUKI (JP); YAMADA YUIKO (JP); YASOHARA  
YOSHIHIKO (JP); NISHIYAMA AKIRA (JP); MIYAZAKI MAKOTO (JP);  
MITSUDA MASARU (JP); KONDO TAKESHI (JP); UYEYAMA NOBORU (JP); INOUE  
KENJI (JP)  
Priority (No,Kind,Date): JP 98221495 A 19980805; JP 99158033 A  
19990604; WO 99JP4229 W 19990805  
Applic (No,Kind,Date): NO 20001703 A 20000403  
IPC: \* C12P  
CA Abstract No: \* 132(13)166230U; 134(04)041920D  
Derwent WPI Acc No: \* C 00-224013; C 01-091183  
Language of Document: Norwegian  
Patent (No,Kind,Date): NO 200001703 A0 20000403  
FREMANGANGSMAATE FOR FREMSTILLING AV OPTISK AKTIVE 2-(6- (Norwegian)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): KIZAKI NORIYUKI (JP); YAMADA YUIKO (JP); YASOHARA  
YOSHIHIKO (JP); NISHIYAMA AKIRA (JP); MIYAZAKI MAKOTO (JP);  
MITSUDA MASARU (JP); KONDO TAKESHI (JP); UYEYAMA NOBORU (JP); INOUE

KENJI (JP)  
Priority (No,Kind,Date): JP 98221495 A 19980805; JP 99158033 A  
19990604; WO 99JP4229 W 19990805  
Applic (No,Kind,Date): NO 20001703 A 20000403  
IPC: \* C12P  
CA Abstract No: \* 132(13)166230U; 134(04)041920D  
Derwent WPI Acc No: \* C 00-224013; C 01-091183  
Language of Document: Norwegian

## UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 20030040634 AA 20030227  
Process for producing optically active  
2-(6-(hydroxymethyl)-1,3-dioxan-4yl)acetic acid derivatives (English)  
Patent Assignee: KIZAKI NORIYUKI (JP); YAMADA YUKIO (JP); YASOHARA  
YOSHIHIKO (JP); NISHIYAMA AKIRA (JP); MIYAZAKI MAKOTO (JP);  
MITSUDA MASARU (JP); KONDO TAKESHI (JP); UYEYAMA NOBORU (JP); INOUE  
KENJI (JP)  
Author (Inventor): KIZAKI NORIYUKI (JP); YAMADA YUKIO (JP); YASOHARA  
YOSHIHIKO (JP); NISHIYAMA AKIRA (JP); MIYAZAKI MAKOTO (JP);  
MITSUDA MASARU (JP); KONDO TAKESHI (JP); UYEYAMA NOBORU (JP); INOUE  
KENJI (JP)  
Priority (No,Kind,Date): US 242453 A 20020913; JP 98221495 A  
19980805; JP 99158033 A 19990604; US 509998 A3 20000816  
Applic (No,Kind,Date): US 242453 A 20020913  
Addnl Info: 6472544 Patented  
National Class: \* 549375000  
IPC: \* C07D-319/06  
Language of Document: English

Patent (No,Kind,Date): US 6340767 BA 20020122  
Processes for the preparation of 5-hydroxy-3-oxopentanoic acid  
derivatives (English)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): NISHIYAMA AKIRA (JP); INOUE KENJI (JP)  
Priority (No,Kind,Date): JP 99158033 A 19990604; JP 200023804 A  
20000201; WO 2000JP3574 W 20000602  
Applic (No,Kind,Date): US 762215 A 20010405  
National Class: \* 554115000; 560174000; 554115000  
IPC: \* C07C-051/00  
Language of Document: English

Patent (No,Kind,Date): US 6472544 BA 20021029  
Process for the preparation of optically active  
2-A6-(hydroxymethyl)-1,3-dioxan-4ylacetic acid derivatives (English)  
Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP)  
Author (Inventor): KIZAKI NORIYUKI (JP); YAMADA YUKIO (JP); YASOHARA  
YOSHIHIKO (JP); NISHIYAMA AKIRA (JP); MIYAZAKI MAKOTO (JP);  
MITSUDA MASARU (JP); KONDO TAKESHI (JP); UYEYAMA NOBORU (JP); INOUE  
KENJI (JP)  
Priority (No,Kind,Date): JP 98221495 A 19980805; JP 99158033 A  
19990604; WO 99JP4229 W 19990805  
Applic (No,Kind,Date): US 509998 A 20000816  
National Class: \* 549333000; 549375000  
IPC: \* C07D-319/06  
Language of Document: English

## UNITED STATES OF AMERICA (US)

Legal Status (No,Type,Date,Code,Text):  
US 2000509998 A 20000816 US REFW CORRESPONDS TO PCT  
APPLICATION  
WO 200008011 P  
US 20010762215 A 20010405 US REFW CORRESPONDS TO PCT

APPLICATION  
 WO 200075099 P

US 6340767	P	19990604	US AA	PRIORITY (PATENT)
			JP 99158033 A	19990604
US 6340767	P	20000201	US AA	PRIORITY (PATENT)
			JP 200023804 A	20000201
US 6340767	P	20000602	US AA	PCT-APPLICATION
			WO 2000JP3574 W	20000602
US 6340767	P	20010405	US AE	APPLICATION DATA (PATENT)
			(APPL. DATA (PATENT))	
			US 762215 A	20010405
US 6340767	P	20020122	US BA	PATENT (NO PREVIOUS
			PRE-GRANT PUBLICATION)	
US 6340767	P	20040113	US RF	REISSUE APPLICATION FILED
			(REISSUE APPL. FILED)	
			DATE: 20031112	
US 6472544	P	19980805	US AA	PRIORITY (PATENT)
			JP 98221495 A	19980805
US 6472544	P	19990604	US AA	PRIORITY (PATENT)
			JP 99158033 A	19990604
US 6472544	P	19990805	US AA	PCT-APPLICATION
			WO 99JP4229 W	19990805
US 6472544	P	20000816	US AE	APPLICATION DATA (PATENT)
			(APPL. DATA (PATENT))	
			US 509998 A	20000816
US 6472544	P	20021029	US BA	PATENT (NO PREVIOUS
			PRE-GRANT PUBLICATION)	
US 6472544	P	20030624	US CC	CERTIFICATE OF CORRECTION
US 20030040634	P	19980805	US AA	PRIORITY (PATENT)
			JP 98221495 A	19980805
US 20030040634	P	19990604	US AA	PRIORITY (PATENT)
			JP 99158033 A	19990604
US 20030040634	P	20000816	US AA	PRIORITY (DIVISION)
			US 509998 A3	20000816
US 20030040634	P	20020913	US AE	APPLICATION DATA (PATENT)
			(APPL. DATA (PATENT))	
			US 242453 A	20020913
US 20030040634	P	20030227	US A1A1	PATENT APPLICATION
			PUBLICATION (PRE-GRANT)	

## WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Patent (No,Kind,Date): WO 200008011 A1 20000217

PROCESS FOR THE PREPARATION OF OPTICALLY ACTIVE

2-(6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL)ACETIC ACID DERIVATIVES PROCEDE

DE PREPARATION DE DERIVES OPTIQUEMENT ACTIFS DE L'ACIDE

2-(6-(HYDROXYMETHYL)-1,3-DIOXAN-4-YL) ACETIQUE (English)

Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP); KIZAKI NORIYUKI (JP)

; YAMADA YUKIO (JP); YASOHARA YOSHIHIKO (JP); NISHIYAMA AKIRA (JP)

; MIYAZAKI MAKOTO (JP); MITSUDA MASARU (JP); KONDO TAKESHI (JP);

UEYAMA NOBORU (JP); INOUE KENJI (JP)

Author (Inventor): KIZAKI NORIYUKI (JP); YAMADA YUKIO (JP); YASOHARA

YOSHIHIKO (JP); NISHIYAMA AKIRA (JP); MIYAZAKI MAKOTO (JP);

MITSUDA MASARU (JP); KONDO TAKESHI (JP); UHEYAMA NOBORU (JP); INOUE

KENJI (JP)

Priority (No,Kind,Date): JP 98221495 A 19980805; JP 99158033 A  
19990604

Applic (No,Kind,Date): WO 99JP4229 A 19990805

Designated States: (National) CA; CN; HU; IN; JP; KR; NO; US

(Regional) AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC

; NL; PT; SE

Filing Details: WO 100000 With international search report  
 IPC: \* C07D-319/06; C07D-319/08; C07C-059/90; C07C-051/353;  
 C07C-059/115; C12P-007/04; C12R-001-72; C12R-001-645; C12R-001-78;  
 C12R-001-84; C12R-001-85; C12R-001-13; C12R-001-15; C12R-001-01  
 Language of Document: Japanese  
 Patent (No,Kind,Date): WO 200075099 A1 20001214  
 PROCESSES FOR THE PREPARATION OF 5-HYDROXY-3-OXOPENTANOIC ACID  
 DERIVATIVES PROCEDES DE PREPARATION DE DERIVES D'ACIDE 5-HYDROXY-3-  
 OXOPENTANOIQUE (English)  
 Patent Assignee: KANEGAFUCHI CHEMICAL IND (JP); NISHIYAMA AKIRA (JP)  
 ; INOUE KENJI (JP)  
 Author (Inventor): NISHIYAMA AKIRA (JP); INOUE KENJI (JP)  
 Priority (No,Kind,Date): JP 99158033 A 19990604; JP 200023804 A  
 20000201  
 Applic (No,Kind,Date): WO 2000JP3574 A 20000602  
 Designated States: (National) AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG;  
 BR; BY; CA; CH; CN; CR; CU; CZ; DE; DK; DM; DZ; EE; ES; FI; GB; GD;  
 GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK;  
 LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; PL; PT;  
 RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; TZ; UA; UG; US; UZ;  
 VN; YU; ZA; ZW (Regional) GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ;  
 UG; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; CH; CY; DE; DK;  
 ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI;  
 CM; GA; GN; GW; ML; MR; NE; SN; TD; TG  
 Filing Details: WO 100000 With international search report  
 IPC: \* C07C-067/343; C07C-069/716; C07C-253/30; C07C-255/21;  
 C07M-007-00; C07B-049/00  
 Language of Document: Japanese

## WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Legal Status (No,Type,Date,Code,Text):

WO 200008011	P	19980805	WO AA	PRIORITY (PATENT)
			JP 98221495 A	19980805
WO 200008011	P	19990604	WO AA	PRIORITY (PATENT)
			JP 99158033 A	19990604
WO 200008011	P	19990805	WO AE	APPLICATION DATA (APPL. DATA)
			WO 99JP4229 A	19990805
WO 200008011	P	20000217	WO AK	DESIGNATED STATES CITED IN A PUBLISHED APPLICATION WITH SEARCH REPORT (DESIGNATED STATES CITED IN A PUBLISHED APPL. WITH SEARCH REPORT)
			CA CN HU IN JP KR NO US	
WO 200008011	P	20000217	WO AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS CITED IN A PUBLISHED APPLICATION WITH SEARCH REPORT (DESIGNATED COUNTRIES FOR REGIONAL PATENTS CITED IN A PUBLISHED APPL. WITH SEARCH REPORT)
			AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE	
WO 200008011	P	20000217	WO A1	PUBLICATION OF THE INTERNATIONAL APPLICATION WITH THE INTERNATIONAL SEARCH REPORT (PUB. OF THE INTERNATIONAL APPL. WITH THE INTERNATIONAL SEARCH REPORT)
WO 200008011	P	20000330	WO ENP	ENTRY INTO THE NATIONAL PHASE IN:
			KR 2000703438 A	
WO 200008011	P	20000331	WO ENP	ENTRY INTO THE NATIONAL PHASE IN:

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WO 200008011 P 20000412 WO 121 EP: ALL PREREQUISITES FOR  
ENTERING THE EUROP. PHASE FULFILED  
WO 200008011 P 20000816 WO ENP ENTRY INTO THE NATIONAL  
PHASE IN:  
US 509998 A 20000816  
WO 200075099 P 19990604 WO AA PRIORITY (PATENT)  
JP 99158033 A 19990604  
WO 200075099 P 20000201 WO AA PRIORITY (PATENT)  
JP 200023804 A 20000201  
WO 200075099 P 20000602 WO AE APPLICATION DATA (APPL.  
DATA)  
WO 2000JP3574 A 20000602  
WO 200075099 P 20001116 WO ENP ENTRY INTO THE NATIONAL  
PHASE IN:  
JP 501581 A  
WO 200075099 P 20001214 WO AK DESIGNATED STATES CITED IN A  
PUBLISHED APPLICATION WITH SEARCH REPORT  
(DESIGNATED STATES CITED IN A PUBLISHED APPL.  
WITH SEARCH REPORT)  
AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN  
CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM  
HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL  
PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA  
UG US UZ VN YU ZA ZW  
WO 200075099 P 20001214 WO AL DESIGNATED COUNTRIES FOR  
REGIONAL PATENTS CITED IN A PUBLISHED  
APPLICATION WITH SEARCH REPORT (DESIGNATED  
COUNTRIES FOR REGIONAL PATENTS CITED IN A  
PUBLISHED APPL. WITH SEARCH REPORT)  
GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY  
KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR  
GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM  
GA GN GW ML MR NE SN TD TG  
WO 200075099 P 20001214 WO A1 PUBLICATION OF THE  
INTERNATIONAL APPLICATION WITH THE  
INTERNATIONAL SEARCH REPORT (PUB. OF THE  
INTERNATIONAL APPL. WITH THE INTERNATIONAL  
SEARCH REPORT)  
WO 200075099 P 20010202 WO ENP ENTRY INTO THE NATIONAL  
PHASE IN:  
CA 2339357 AA  
WO 200075099 P 20010207 WO 121 EP: THE EPO HAS BEEN  
INFORMED BY WIPO THAT EP WAS DESIGNATED IN  
THIS APPLICATION  
WO 200075099 P 20010405 WO ENP ENTRY INTO THE NATIONAL  
PHASE IN:  
US 762215 A 20010405  
WO 200075099 P 20011011 DE 8642/REG IMPACT ABOLISHED FOR DE  
(WIRKUNG WEGGEFALLEN FUER DE)  
WO 200075099 P 20020902 WO NENP NON-ENTRY INTO THE NATIONAL  
PHASE IN:  
RU

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